

# 173-480 AMBIENT AIR QUALITY STANDARDS AND EMISSION LIMITS FOR RADIONUCLIDES

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173-480-010	Purpose.
173-480-020	Applicability.
173-480-030	Definitions.
173-480-040	Ambient standard.
173-480-050	General standards for maximum permissible emissions.
173-480-060	Emission standards for new and modified emission units.
173-480-070	Emission monitoring and compliance procedures.
173-480-080	Regulatory actions and penalties.

## 173-480-010 PURPOSE.

The purpose of this chapter is to define maximum allowable levels for radionuclides in the ambient air and control emissions from specific sources.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-010, filed 5/7/86.]

## 173-480-020 APPLICABILITY.

- (1) The ambient air standards shall apply to the entire state. Measurements may be made at all points up to property lines of point, area and fugitive emission sources.
- (2) The emission limits of this chapter shall apply to all radionuclide emission units.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-020, filed 5/7/86.]

## 173-480-030 DEFINITIONS.

Unless a different meaning is clearly required by context words and phrases used in this chapter shall have the following meanings: General terms common with other chapters as defined in chapter 173-403 WAC, and terms specific to the standards and limits of radionuclides as defined in this section.

- (1) Best available radionuclide control technology "BARCT" means technology which will result in a radionuclide emission limitation based on the maximum degree of reduction for radionuclides which would be emitted from any proposed new or modified emission units which the permitting authority on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such emission unit or modification through application of production processes or available methods, systems, and techniques. In no event shall application of best available radionuclide technology result in emissions of radionuclides which would exceed the ambient annual standard limitation specified in this chapter.

- (2) "Critical organ" means the most exposed human organ or tissue exclusive of the skin (integumentary system) and the cornea.
- (3) "Dose equivalent" means the product of absorbed dose and appropriate factors to account for differences in biological effectiveness due to the quantity of radiation and its distribution in the body.
- (4) "Radionuclide" means any nuclide that emits radiation.
- (5) "Rem" means a unit of dose equivalent radiation.
- (6) "Whole body" means all human organs or tissue exclusive of the skin (integumentary system) and the cornea.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-030, filed 5/7/86.]

#### 173-480-040 AMBIENT STANDARD.

Emissions of radionuclides in the air shall not cause a maximum accumulated dose equivalent of more than 25 mrem/y to the whole body or 75 mrem/y to a critical organ of any member of the public. Doses due to radon-220, radon-222, and their respective decay products are excluded from these limits. Compliance with the standard shall be determined by procedures in WAC 173-480-070.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-040, filed 5/7/86.]

#### 173-480-050 GENERAL STANDARDS FOR MAXIMUM PERMISSIBLE EMISSIONS.

- (1) All radionuclide emission units are required to meet the emission standards in this chapter. At a minimum all emission units shall meet WAC 402-10-010 requiring every reasonable effort to maintain radioactive materials in effluents to unrestricted areas, as low as reasonably achievable (ALARA). For the purposes of this chapter, control equipment of facilities operating under ALARA shall be defined as reasonably available control technology (RACT).
- (2) PSD: The emission requirements for an emission unit of radionuclides shall be the same for all areas of the state independent of prevention of significant deterioration (PSD) classification.
- (3) Whenever another federal or state regulation or limitation in effect controls the emission of radionuclides to the ambient air, the more stringent control of emissions shall govern.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-050, filed 5/7/86.]

#### 173-480-060 EMISSION STANDARDS FOR NEW AND MODIFIED EMISSION UNITS.

- (1) Whenever the construction, installation or establishment of a new emission unit subject to this chapter is contemplated, the project shall utilize best available radionuclide control technology (BARCT).
- (2) Addition to, enlargement, modification, replacement, alteration of any process or emission unit or replacement of air pollution control equipment which will significantly change potential radionuclide emissions or significantly change the dose equivalent will require the proposed project to utilize best available radionuclide control technology (BARCT) for emission control.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-060, filed 5/7/86.]

#### 173-480-070 EMISSION MONITORING AND COMPLIANCE PROCEDURES.

- (1) The procedures specified in chapter 402-80 WAC shall be used to determine compliance with the standard. Radionuclide emissions shall be determined and dose equivalents to members of the public shall be calculated using department of social and health services approved sampling procedures, department of social and health services approved models, or other procedures, including those based on environmental measurements that department of social and health services has determined to be suitable.
- (2) Compliance with this standard shall be determined by calculating the dose to members of the public at the point of maximum annual air concentration in an unrestricted area where any member of the public may be.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-070, filed 5/7/86.]

#### 173-480-080 REGULATORY ACTIONS AND PENALTIES.

- (1) The department or any activated local air pollution control authority may enforce this chapter with the provisions of WAC 173-403-170, Regulatory actions; and 173-403-180, Criminal penalties.
- (2) The responsible person may also be subject to the provisions of RCW 34.04.030, Emergency rules and amendments; 70.98.130, Administrative procedure; 70.98.140, Injunction proceedings; and 70.98.200, Penalties as cited by the department of social and health services.

[Statutory Authority: RCW 70.94.331. 86-10-053 (Order 86-04), § 173-480-080, filed 5/7/86.]